

In the claims:

1-22. (Cancelled)

23. (Currently Amended) ~~The A pharmaceutical composition comprising a compound according to claim 22, selected from the group consisting of:~~  
(*E,E*)-2-(benzylaminocarbonyl)-3-(3,4-dihydroxystyryl)acrylonitrile (CR4);  
(*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11);  
(*E,E*)-2-aminocarbonyl-3-(3,4-dihydroxystyryl)acrylonitrile (CR17);  
(*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-styrylacrylonitrile (CR19);  
(*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-(3,4-dihydroxystyryl)acrylonitrile (CR21); and  
(*E,E*)-2-( $\beta$ -ethanolaminocarbonyl)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR24).

24. (Previously Presented) A pharmaceutical composition comprising a pharmaceutically acceptable diluent or carrier and (*E,E*)-2-(benzylaminocarbonyl)-3-(3,4-dihydroxystyryl)acrylonitrile (CR4).

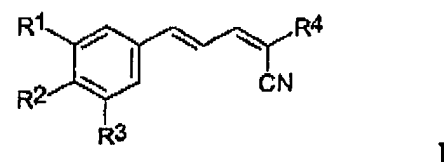
25. (Previously Presented) A pharmaceutical composition comprising a pharmaceutically acceptable diluent or carrier and (*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11).

26. (Currently Amended) A pharmaceutical composition comprising a pharmaceutically acceptable diluent or carrier and (*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-styrylacrylonitrile (CR19).

27. (Cancelled)

28. (Currently Amended) A method of modulating cell proliferation comprising administering ~~an effective amount of a composition of claim 23~~ to a cell or animal in

need thereof an effective amount of a compound of Formula I, or a salt, solvate or hydrate thereof:



wherein

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of H, OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, O-Si(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;

R<sup>3</sup> is selected from the group consisting of H, OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, O-Si(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), NO<sub>2</sub>, halo and CH<sub>2</sub>-S-(CH<sub>2</sub>)<sub>n</sub> Ar;

R<sup>4</sup> is selected from the group consisting of C(X)R<sup>5</sup>, SO<sub>3</sub>Ar, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), P(O)(OH)<sub>2</sub>, P(O)(OC<sub>1-6</sub>alkyl)<sub>2</sub>, and C(NH<sub>2</sub>)=C(CN)<sub>2</sub>;

X is selected from O, S, NH and N-C<sub>1-6</sub>alkyl;

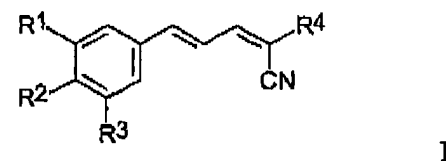
R<sup>5</sup> is selected from the group consisting of NH<sub>2</sub>, OH, NH(CH<sub>2</sub>)<sub>p</sub>Ar, NH(CH<sub>2</sub>)<sub>p</sub>OH, (CH<sub>2</sub>)<sub>p</sub>OC<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NHNH<sub>2</sub>, NHC(O)NH<sub>2</sub>, NHC(O)C<sub>1-6</sub>alkoxy, N-morpholino and N-pyrrolidino; and

Ar is an aromatic or heteroaromatic group, unsubstituted or substituted with 1-4 substituents, independently selected from the group consisting of OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;

n is 0 to 4; and

p is 1-4.

29. (Currently Amended) A method of inhibiting cell proliferation comprising administering ~~an effective amount of a composition of claim 23~~ to a cell or animal in need thereof an effective amount of a compound of Formula I, or a salt, solvate or hydrate thereof:



wherein

$R^1$  and  $R^2$  are each independently selected from the group consisting of H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $NH_2$ ,  $NH-C_{1-6}$ alkyl,  $N(C_{1-6}alkyl)(C_{1-6}alkyl)$ , SH,  $S-C_{1-6}alkyl$ ,  $O-Si(C_{1-6}alkyl)(C_{1-6}alkyl)(C_{1-6}alkyl)$ ,  $NO_2$ ,  $CF_3$ ,  $OCF_3$  and halo;

$R^3$  is selected from the group consisting of H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $NH_2$ ,  $NH-C_{1-6}alkyl$ ,  $N(C_{1-6}alkyl)(C_{1-6}alkyl)$ , SH,  $S-C_{1-6}alkyl$ ,  $O-Si(C_{1-6}alkyl)(C_{1-6}alkyl)(C_{1-6}alkyl)$ ,  $NO_2$ , halo and  $CH_2-S-(CH_2)_nAr$ ;

$R^4$  is selected from the group consisting of  $C(X)R^5$ ,  $SO_3Ar$ ,  $NH_2$ ,  $NH-C_{1-6}alkyl$ ,  $N(C_{1-6}alkyl)(C_{1-6}alkyl)$ ,  $P(O)(OH)_2$ ,  $P(O)(OC_{1-6}alkyl)_2$ , and  $C(NH_2)=C(CN)_2$ ;

X is selected from O, S, NH and  $N-C_{1-6}alkyl$ ;

$R^5$  is selected from the group consisting of  $NH_2$ , OH,  $NH(CH_2)_pAr$ ,  $NH(CH_2)_pOH$ ,  $(CH_2)_pOC_{1-6}alkyl$ ,  $C_{1-6}alkyl$ ,  $C_{1-6}alkoxy$ ,  $NHNH_2$ ,  $NHC(O)NH_2$ ,  $NHC(O)C_{1-6}alkoxy$ , N-morpholino and N-pyrrolidino; and

Ar is an aromatic or heteroaromatic group, unsubstituted or substituted with 1-4 substituents, independently selected from the group consisting of OH,  $C_{1-6}alkyl$ ,  $C_{1-6}alkoxy$ ,  $NH_2$ ,  $NH-C_{1-6}alkyl$ ,  $N(C_{1-6}alkyl)(C_{1-6}alkyl)$ , SH,  $S-C_{1-6}alkyl$ ,  $NO_2$ ,  $CF_3$ ,  $OCF_3$  and halo;

n is 0 to 4; and

p is 1-4.

30. (Original) The method of claim 29, wherein the cell proliferation that is inhibited is cancer cell proliferation.

31. (Cancelled)

32. (Currently Amended) The method of claim 30 or 31, wherein said cancer is a hematopoietic cell cancer.

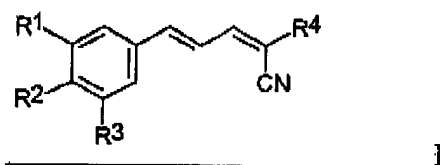
33. (Currently Amended) The method of claim 30 ~~or 31~~, wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma.

34. (Currently Amended) The method of claim 33, wherein said cancer is a leukemia selected from is acute lymphoblastic leukemia, Philadelphia<sup>+</sup> leukemia, Philadelphia<sup>-</sup> leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile myelomonocyte leukemia.

35. (Previously Presented) The method of claim 34, wherein said leukemia is acute lymphoblastic leukemia.

36-37. (Cancelled)

38. (Currently Amended) A method of inhibiting hematopoietic cancer cell proliferation, comprising administering ~~an effective amount of a composition according to claim 1~~ to a cell or animal in need thereof an effective amount of a compound of Formula I, or a salt, solvate or hydrate thereof:



wherein

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of H, OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, O-Si(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;

R<sup>3</sup> is selected from the group consisting of H, OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, O-Si(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), NO<sub>2</sub>, halo and CH<sub>2</sub>-S-(CH<sub>2</sub>)<sub>n</sub> Ar;

R<sup>4</sup> is selected from the group consisting of C(X)R<sup>5</sup>, SO<sub>3</sub>Ar, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), P(O)(OH)<sub>2</sub>, P(O)(OC<sub>1-6</sub>alkyl)<sub>2</sub>, and C(NH<sub>2</sub>)-C(CN)<sub>2</sub>;

X is selected from O, S, NH and N-C<sub>1-6</sub>alkyl;

R<sup>5</sup> is selected from the group consisting of NH<sub>2</sub>, OH, NH(CH<sub>2</sub>)<sub>p</sub>Ar, NH(CH<sub>2</sub>)<sub>p</sub>OH, (CH<sub>2</sub>)<sub>p</sub>OC<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NHNH<sub>2</sub>, NHC(O)NH<sub>2</sub>, NHC(O)C<sub>1-6</sub>alkoxy, N-morpholino and N-pyrrolidino; and

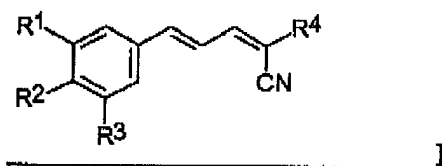
Ar is an aromatic or heteroaromatic group, unsubstituted or substituted with 1-4 substituents, independently selected from the group consisting of OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;

n is 0 to 4; and

p is 1-4.

39-40. (Cancelled)

41. **(Currently Amended)** A method of inhibiting cancer cell proliferation according to claim 38, wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma, comprising administering to a cell or animal in need thereof an effective amount of a compound of Formula I, or a salt, solvate or hydrate thereof;



wherein

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of H, OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, O-Si(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;

R<sup>3</sup> is selected from the group consisting of H, OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, O-Si(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), NO<sub>2</sub>, halo and CH<sub>2</sub>-S-(CH<sub>2</sub>)<sub>n</sub>Ar;

R<sup>4</sup> is selected from the group consisting of C(X)R<sup>5</sup>, SO<sub>3</sub>Ar, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), P(O)(OH)<sub>2</sub>, P(O)(OC<sub>1-6</sub>alkyl)<sub>2</sub>, and C(NH<sub>2</sub>)-C(CN)<sub>2</sub>;

X is selected from O, S, NH and N-C<sub>1-6</sub>alkyl;

R<sup>5</sup> is selected from the group consisting of NH<sub>2</sub>, OH, NH(CH<sub>2</sub>)<sub>n</sub>Ar, NH(CH<sub>2</sub>)<sub>p</sub>OH, (CH<sub>2</sub>)<sub>p</sub>OC<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NHNH<sub>2</sub>, NHC(O)NH<sub>2</sub>, NHC(O)C<sub>1-6</sub>alkoxy, N-morpholino and N-pyrrolidino; and

Ar is an aromatic or heteroaromatic group, unsubstituted or substituted with 1-4 substituents, independently selected from the group consisting of OH, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, NH<sub>2</sub>, NH-C<sub>1-6</sub>alkyl, N(C<sub>1-6</sub>alkyl)(C<sub>1-6</sub>alkyl), SH, S-C<sub>1-6</sub>alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;

n is 0 to 4; and

p is 1-4.

42. (Currently Amended) A method according to claim 41, wherein said cancer is a leukemia selected from is acute lymphoblastic leukemia, aggressive Philadelphia+ leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile myelomonocyte leukemia,

43. (Previously Presented) A method according to claim 42, wherein said leukemia is acute lymphoblastic leukemia.

44. (Previously Presented) A pharmaceutical composition comprising a pharmaceutically acceptable diluent or carrier and (*E,E*)-2-carboxy-3-(3,4-dihydroxystyryl)acrylonitrile.

45-46. (Cancelled)

47. (Currently Amended) A compound selected from:

(*E,E*)-2-(benzylaminocarbonyl)-3-(3,4-dihydroxystyryl)acrylonitrile (CR4);

(*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11);

(*E,E*)-2-aminocarbonyl-3-(3,4-dihydroxystyryl)acrylonitrile (CR17);

(*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-styrylacrylonitrile (CR19);

(*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-(3,4-dihydroxystyryl)acrylonitrile (CR21); and

(*E,E*)-2-( $\beta$ -ethanolaminocarbonyl)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR24).

48. (Previously Presented) A compound (*E,E*)-2-benzylaminocarbonyl)-3-(3,4-dihydroxystyryl)acrylonitrile (CR4).

49. (Previously Presented) A compound (*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11).

50. (Previously Presented) A compound (*E,E*)-2-(3,4-dihydroxybenzylaminocarbonyl)-3-styrylacrylonitrile (CR19).

51. (Previously Presented) A compound (*E,E*)-2-carboxy-3-(3,4-dihydroxystyryl)acrylonitrile.

52-57. (Cancelled)

58. (Previously Presented) The compound (*E,E*)-2-carboxy-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR-14).